

**HIGH RESOLUTION IMAGING INSTRUMENT USING NON-UNIFORMLY
ARRAYED SENSORS**

Abstract of the Disclosure

25 An imaging instrument includes plural spaced-apart photon collectors, whose sampled outputs are correlated in pairs to yield brightness line integrals across a remote object being imaged. These integrals can be subject to matrix decomposition to yield a 2D array of image data corresponding to the object. Another imaging instrument includes plural spaced-apart reflectors, each having an optical fiber end at its focal point. The precise positions of the optical
10 fiber ends are controlled by a control system (e.g., including piezo-electric positioners) that can be operated to counter-act the effect of atmospheric turbulence. The other ends of the fibers terminate at an image plane and serve to provide an output image. The sensors may be arrayed in a non-uniform manner.

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